

AMENDMENTS TO THE CLAIMS:

1-2.(cancelled):

3.(currently amended): ~~The A~~ server apparatus for a space information service
comprising: according to claim 2,

an information bubble managing unit for managing bubble data in which space
range information including position information in a real physical space is correlated with
supply information in order to virtually register an information bubble related with said desired
supply information in said real physical space;

an extracting unit for extracting supply information of bubble data including
retrieval object space range information based on position information on a user terminal from
said information bubble managing unit;

a providing unit for providing said supply information extracted by said extracting
unit to said user terminal; and

an information bubble movement control unit for updating at least position
information of said bubble data to virtually move said information bubble in said real physical
space, said information bubble movement control unit including

an information bubble behavior setting unit for setting behavior data defining
behavior of said information bubble in said real physical space, and

an information bubble moving unit for updating position information of said
bubble data on the basis of said behavior data set by said information bubble behavior setting
unit to move said information bubble according to said behavior data,

wherein said information bubble behavior setting unit including comprises

a random number generating unit for generating a random number with respect to position information of said bubble data as behavior data; and

said information bubble moving unit including comprises

a first information bubble position updating unit for randomly updating position information of said bubble data with the random number generated by said random number generating unit to randomly move said information bubble in said real physical space.

4.(original): The server apparatus for a space information service according to claim 3, wherein said information bubble behavior setting unit comprises a condition setting unit for setting condition data with respect to a time to move said information bubble to a specific position in said real physical space as said behavior data; and

said information bubble moving unit comprises a second information bubble position updating unit for updating position information of said bubble data to position information on said specific position at a time defined by said condition data.

5.(original): The server apparatus for a space information service according to claim 4, wherein said information bubble behavior setting unit sets an initial registered position for said information bubble as said specific position.

6.(original): The server apparatus for a space information service according to claim 5, wherein said condition setting unit sets data with respect to an available period to move said information bubble as said condition data.

7.(original): The server apparatus for a space information service according to claim 4, wherein said condition setting unit sets data with respect to an available period to move said information bubble as said condition data.

8.(original): The server apparatus for a space information service according to claim 4, wherein said information bubble managing unit comprises a supply information updating unit for updating said supply information according to update information about said supply information from user terminals having received said supply information.

9.(original): The server apparatus for a space information service according to claim 8, wherein said condition setting unit sets data with respect to the number of times of update of said supply information by said supply information updating unit as said condition data.

10.(cancelled)

11.(currently amended): The A server apparatus for a space information service comprising: according to claim 5;

an information bubble managing unit for managing bubble data in which space range information including position information in a real physical space is correlated with supply information in order to virtually register an information bubble related with said desired supply information in said real physical space;

an extracting unit for extracting supply information of bubble data including retrieval object space range information based on position information on a user terminal from said information bubble managing unit;

a providing unit for providing said supply information extracted by said extracting unit to said user terminal; and

an information bubble movement control unit for updating at least position information of said bubble data to virtually move said information bubble in said real physical space, said information bubble movement control unit including

an information bubble behavior setting unit for setting behavior data defining behavior of said information bubble in said real physical space, and

an information bubble moving unit for updating position information of said bubble data on the basis of said behavior data set by said information bubble behavior setting unit to move said information bubble according to said behavior data.

wherein said information bubble behavior setting unit includes a condition setting unit for setting condition data with respect to a time to move said information bubble to a specific position in said real physical space as said behavior data, said information bubble behavior setting unit sets an initial registered position for said information bubble as said specific position, and

said information bubble moving unit includes a second information bubble position updating unit for updating position information of said bubble data to position information on said specific position at a time defined by said condition data.

12.(currently amended): The server apparatus for a space information service comprising: according to claim 10,

an information bubble managing unit for managing bubble data in which space range information including position information in a real physical space is correlated with

supply information in order to virtually register an information bubble related with said desired supply information in said real physical space;

an extracting unit for extracting supply information of bubble data including retrieval object space range information based on position information on a user terminal from said information bubble managing unit;

a providing unit for providing said supply information extracted by said extracting unit to said user terminal; and

an information bubble movement control unit for updating at least position information of said bubble data to virtually move said information bubble in said real physical space, said information bubble movement control unit including

an information bubble behavior setting unit for setting behavior data defining behavior of said information bubble in said real physical space, and

an information bubble moving unit for updating position information of said bubble data on the basis of said behavior data set by said information bubble behavior setting unit to move said information bubble according to said behavior data,

wherein said information bubble behavior setting unit including a condition setting unit for setting condition data with respect to a time to move said information bubble to a specific position in said real physical space as said behavior data, and

said information bubble moving unit including a second information bubble position updating unit for updating position information of said bubble data to position information on said specific position at a time defined by said condition data, and

wherein said condition setting unit sets data with respect to an available period to move said information bubble as said condition data.

13.(currently amended): The server apparatus for a space information service
comprising: according to claim 10;

an information bubble managing unit for managing bubble data in which space
range information including position information in a real physical space is correlated with
supply information in order to virtually register an information bubble related with said desired
supply information in said real physical space;

an extracting unit for extracting supply information of bubble data including
retrieval object space range information based on position information on a user terminal from
said information bubble managing unit;

a providing unit for providing said supply information extracted by said extracting
unit to said user terminal; and

an information bubble movement control unit for updating at least position
information of said bubble data to virtually move said information bubble in said real physical
space, said information bubble movement control unit including

an information bubble behavior setting unit for setting behavior data defining
behavior of said information bubble in said real physical space, and

an information bubble moving unit for updating position information of said
bubble data on the basis of said behavior data set by said information bubble behavior setting
unit to move said information bubble according to said behavior data,

wherein said information bubble behavior setting unit including a condition
setting unit for setting condition data with respect to a time to move said information bubble to a
specific position in said real physical space as said behavior data, and

said information bubble moving unit including a second information bubble position updating unit for updating position information of said bubble data to position information on said specific position at a time defined by said condition data, and

wherein said information bubble managing unit ~~comprises~~ includes a supply information updating unit for updating said supply information according to ~~update~~ upload information about said supply information received from ~~[[a]]~~ one or more of user terminals having used said space information service and received said supply information.

14.(currently amended): ~~The A~~ server apparatus for a space information service comprising: ~~according to claim 13,~~

an information bubble managing unit for managing bubble data in which space range information including position information in a real physical space is correlated with supply information in order to virtually register an information bubble related with said desired supply information in said real physical space;

an extracting unit for extracting supply information of bubble data including retrieval object space range information based on position information on a user terminal from said information bubble managing unit;

a providing unit for providing said supply information extracted by said extracting unit to said user terminal; and

an information bubble movement control unit for updating at least position information of said bubble data to virtually move said information bubble in said real physical space, said information bubble movement control unit including

an information bubble behavior setting unit for setting behavior data defining behavior of said information bubble in said real physical space, and

an information bubble moving unit for updating position information of said bubble data on the basis of said behavior data set by said information bubble behavior setting unit to move said information bubble according to said behavior data.

wherein said information bubble behavior setting unit including a condition setting unit for setting condition data with respect to a time to move said information bubble to a specific position in said real physical space as said behavior data, and

said information bubble moving unit including a second information bubble position updating unit for updating position information of said bubble data to position information on said specific position at a time defined by said condition data, and

wherein said information bubble managing unit includes a supply information updating unit for updating said supply information according to update information about said supply information from a user terminal having received said supply information, and

wherein said condition setting unit sets data with respect to the number of times of update of said supply information by said supply information updating unit as said condition data.

15.(currently amended): The A server apparatus for a space information service comprising: ~~according to claim 1,~~

an information bubble managing unit for managing bubble data in which space range information including position information in a real physical space is correlated with supply information in order to virtually register an information bubble related with said desired supply information in said real physical space;

an extracting unit for extracting supply information of bubble data including retrieval object space range information based on position information on a user terminal from said information bubble managing unit;

a providing unit for providing said supply information extracted by said extracting unit to said user terminal; and

an information bubble movement control unit for updating at least position information of said bubble data to virtually move said information bubble in said real physical space,

wherein said information bubble managing unit ~~comprises~~ includes a supply information updating unit for updating said supply information according to update upload information about said supply information received from [[a]] one or more of user terminals having used said space information service and received said supply information.

16-18.(cancelled)

19.(currently amended): The A method for providing a space information service ~~according to claim 18, comprising the steps of:~~

an information bubble registering step of registering bubble data in which space range information including position information in a real physical space is correlated with supply information in order to virtually register an information bubble related with said desired supply information in said real physical space;

an information bubble moving step of updating at least position information of said bubble data to virtually move said information bubble in said real physical space;

an extracting step of extracting supply information of bubble data including retrieval object space range information based on position information on a user terminal; and
a providing step of providing said supply information extracted at said extracting step to said user terminal.

wherein at said information bubble moving step, position information of said bubble data is updated using a random number to randomly move said information bubble in said real physical space.

20.(original): The method for providing a space information service according to claim 19, wherein at said information bubble moving step, position information of said bubble data is updated to specific position information when a predetermined period is elapsed after a start of movement of said information bubble to move said information bubble to a specific position in said real physical space.

21.(original): The method for providing a space information service according to claim 20, wherein at said information bubble moving step, position information of said bubble data is updated to specific position information when the number of times of update of said supply information by user terminals having received said supply information reaches a predetermined number of times after a start of movement of said information bubble to move said information bubble to a specific position in said real physical space.

22.(original): The method for providing a space information service according to claim 19, wherein at said information bubble moving step, position information of said bubble data is updated to specific position information when the number of times of update of said supply information by user terminals having received said supply information reaches a predetermined

number of times after a start of movement of said information bubble to move said information bubble to a specific position in said real physical space.

23.(original): The method for providing a space information service according to claim 22, wherein said specific position is an initial registered position of said information bubble.

24.(cancelled)

25.(currently amended): The A method for providing a space information service according to claim 24, comprising the steps of:

an information bubble registering step of registering bubble data in which space range information including position information in a real physical space is correlated with supply information in order to virtually register an information bubble related with said desired supply information in said real physical space;

an information bubble moving step of updating at least position information of said bubble data to virtually move said information bubble in said real physical space;

an extracting step of extracting supply information of bubble data including retrieval object space range information based on position information on a user terminal; and

a providing step of providing said supply information extracted at said extracting step to said user terminal.

wherein at said information bubble moving step, position information of said bubble data is updated to specific position information when a predetermined period is elapsed after a start of movement of said information bubble to move said information bubble to a specific position in said real physical space, and

wherein at said information bubble moving step, position information of said bubble data is updated to specific position information when the number of times of update of said supply information by user terminals having received said supply information reaches a predetermined number of times after a start of movement of said information bubble to move said information bubble to a specific position in said real physical space.

26.(cancelled)

27.(currently amended): ~~The A~~ method for providing a space information service according to claim 18, comprising the steps of:

an information bubble registering step of registering bubble data in which space range information including position information in a real physical space is correlated with supply information in order to virtually register an information bubble related with said desired supply information in said real physical space;

an information bubble moving step of updating at least position information of said bubble data to virtually move said information bubble in said real physical space;

an extracting step of extracting supply information of bubble data including retrieval object space range information based on position information on a user terminal; and

a providing step of providing said supply information extracted at said extracting step to said user terminal.

wherein at said information bubble moving step, position information of said bubble data is updated to specific position information when the number of times of update of said supply information by a user terminal having received said supply information reaches a

predetermined number of times after a start of movement of said information bubble to move said information bubble to a specific position in said real physical space.

28.(original): The method for providing a space information service according to claim 27, wherein said specific position is an initial registered position of said information bubble.

29.(cancelled):

30.(original): A charge processing apparatus for a space information service that manages bubble data in which space range information including position information in a real physical space is correlated with supply information in order to virtually register an information bubble related to said desired supply information in said real physical space, and provides supply information of bubble data including retrieval object space range information based on position information on a user terminal to said user terminal, said charge processing apparatus comprising:

an attribute information storing unit for storing plural kinds of attribute information being able to define service modes of said space information service;

a charge type information storing unit for storing information on plural types of service charges which can be objects of charge in said service modes;

a charged account information storing unit for storing information on a plurality of charged accounts;

a charge policy setting unit for arbitrarily combining various kinds of information in said storing unit to set a charged account for an arbitrary service mode and a service charge of an arbitrary type of charge; and

a charge processing unit for executing a charging process to charge said service charge to said charged account according to a setting by said charge policy setting unit.

31.(original): The charge processing apparatus for a space information service according to claim 30, wherein said attribute information storing unit stores attribute information on said user terminal and a user of said user terminal.

32.(original): The charge processing apparatus for a space information service according to claim 31, wherein said attribute information storing unit stores attribute information on said supply information.

33.(original): The charge processing apparatus for a space information service according to claim 32, wherein said attribute information storing unit stores attribute information on a registrant of said supply information.

34.(original): The charge processing apparatus for a space information service according to claim 31, wherein said attribute information storing unit stores attribute information on a registrant of said supply information.

35.(original): The charge processing apparatus for a space information service according to claim 30, wherein said attribute information storing unit stores attribute information on said supply information.

36.(original): The charge processing apparatus for a space information service according to claim 35, wherein said attribute information storing unit stores attribute information on a registrant of said supply information.

37.(original): The charge processing apparatus for a space information service according to claim 30, wherein said attribute information storing unit stores attribute information on a registrant of said supply information.

38.(original): The charge processing apparatus for a space information service according to claim 30, wherein said charge type information storing unit stores information on a use charge and a communication charge for said supply information at the time that said user terminal receives said supply information, and a registration charge for said supply information as information with respect to said service charges.

39.(original): A method for charging a space information service that manages bubble data in which space range information including position information in a real physical space is correlated with supply information in order to virtually register an information bubble related to said desired supply information in said real physical space, and provides supply information of bubble data including retrieval object space information based on position information on a user terminal to said user terminal, said method comprising the steps of:

a charge policy setting step of arbitrary combining plural kinds of attribute information being able to define service modes of said space information service, information on types of plural kinds of service charges that can be objects in said service modes, and information on a plurality of charged accounts to set an arbitrary service mode and a charged account for a service charge of each type of charge; and

a charge processing step of executing a charging process to said charged account for said service charge according to a setting at said charge policy setting step.

40.(original): The method for charging a space information service according to claim 39, wherein said attribute information is attribute information on said user terminal and a user of said user terminal.

41.(original): The method for charging a space information service according to claim 40, wherein said attribute information is attribute information on said supply information.

42.(original): The method for charging a space information service according to claim 41, wherein said attribute information is attribute information on a registrant of said supply information.

43.(original): The method for charging a space information service according to claim 40, wherein information on said service charge is information on a use charge and a communication charge at the time that said user terminal receives said supply information, and a registration charge for said supply information.

44.(original): The method for charging a space information service according to claim 39, wherein said attribute information is attribute information on said supply information.

45.(original): The method for charging a space information service according to claim 44, wherein said attribute information is attribute information on a registrant of said supply information.

46.(original): The method for charging a space information service according to claim 39, wherein said attribute information is attribute information on a registrant of said supply information.

47.(original): The method for charging a space information service according to claim 39, wherein information on said service charge is information on a use charge and a communication charge at the time that said user terminal receives said supply information, and a registration charge for said supply information.